OSU Working Papers in Linguistics 45 (98-130)

Acoustic and Intonational Correlates of Informational Status of Referring Expressions in Standard Korean

Hyeon-Seok Kang
hkang@ling.ohio-state.edu

Abstract: This paper examines the phonetic correlates of informational status of referring expressions in Standard Korean. Two experiments are conducted. The results show that speakers of Standard Korean indicate the informational status of referring expressions not only with acoustic cues such as amplitude and duration but also with intonational phrasing. The results also suggest that speakers of Standard Korean rather clearly distinguish "current" and "displaced" entities. The term 'intonational attenuation' is proposed to describe the use of intonational phrasing by some languages to indicate the given status of referring expressions.

1. Introduction

As previous studies (e.g. Halliday 1967, Chafe 1972 & 1976, Brown 1983, Terken 1984, Horne 1991, Fowler & Housum 1987) have suggested, new and given referring expressions are likely to be produced by speakers in a different manner both syntactically and phonetically. Syntactically it was shown for such languages as English and Dutch that given entities[1] are more likely to be referred to by definite expressions — such as *the definite article + noun* form or a pronominal form — than "new" entities. It was also suggested that there are differences between new and given linguistic entities in their phonetic realizations. Previous studies have suggested f0 movement, f0 value, amplitude and duration as possible phonetic cues for distinguishing new and given linguistic entities. For instance, Halliday (1967) claimed that given and new information are distinguished primarily by pitch prominence. He made a suggestion that in English, new information is given pitch accent while old information is not. A similar suggestion was made by Terken (1984) for Dutch. He (1984) found in his Dutch data that new linguistic entities are generally more often pitch-accented than given linguistic entities. Brown (1983) makes a rather different suggestion. She suggests that new linguistic entities are generally produced with a higher f0 than given linguistic entities.

On the other hand, Chafe (1972, 1976) suggested that informational status is cued both by f0 value and amplitude in English, stating that " ... given information is pronounced with lower pitch and weaker stress than new (information)..."(1976:31). However, the claims of these researchers are either based on subjective judgments or on the measurements of just one phonetic cue — f0 value. The study that investigated the various possible phonetic cues of "given" vs. "new" status by instrumental measurements and attempted to determine which of them are significant cues was Fowler & Housum's (1987) study. They

[1] Prince (1981:235) defines an "entity" as a discourse-model object which may represent an individual (existent or not in the real world), a class of individuals, an exemplar, a substance, or a concept. I adopt her definition in this paper. I will also use the term "linguistic entities" in this paper to indicate those expressions that refer to "entities".

compared duration, amplitude and f0 (peak value of the stressed syllable) between new and given referring expressions. They report that only duration is a "reliable" cue for distinguishing new and given referring expressions in English.

Fowler & Housum (1987) used natural (or close-to natural) speech data (a monologue from a radio program titled "Prairie Home Companion" and interview dialogues from "the MacNeil-Lehrer News") for their study. The use of natural speech data has both merits and defects in this type of study. The merits are that the investigator is able to analyze the data produced by speakers when they actually try to communicate something to listeners and that the experimenter doesn't have to worry about the possible distortions of the results for the experiment caused by the subjects' guess on the experiment's purpose. The defects of the use of natural speech data are also significant.

These defects follow from the fact that the investigator cannot exercise any control over the talkers' use of new and given information. The investigator's inability to exercise control over the talkers' speech production results in two major problems. The first is that the speaker can use phonetic features for purposes other than cuing informational status of linguistic entities. In other words, speakers can use voice pitch, amplitude and duration for other attention-getting purposes — for focal or contrastive purposes, or for holding the floor or for directing the flow of information (Lehman 1977).

The second defect seems to be more serious. It is known that there is a declination phenomenon in f0 toward the end of an intonational phrase in English (Pierrehumbert 1979, Maeda 1976), in Japanese (Fujisaki et al. 1979, Pierrehumbert & Beckman 1988), in Dutch (Cohen & 't Hart 1967), and in Korean (Koo 1986, Ko 1988) — possibly universally (Vassiere 1983). The amplitude early in a sentence is known to be greater than that at the end in English (Ohala 1977, Pierrehumbert 1979) and French (Vassiere 1983) and also possibly universally. Further, it is well known that in languages such as English, French and Korean, vowel duration is significantly lengthened at the end of an intonational phrase (cf. Oller 1973, Delattre 1966, Koo 1986). This suggests that it is very problematic to compare the values of duration, f0 and amplitude between linguistic entities that occur at different sentential positions as Fowler & Housum (1987) did.

Another problem in Fowler & Housum's analysis is that they disregard the fact that in English, which is a pitch accent language, not just higher pitch but extended pitch movement can also contribute to perceptual prominence of linguistic entities. This is a same type of error Brown (1983) makes in her study. They further oversee the fact that in English there are various types of pitch accents. As Beckman & Pierrehumbert (1986:256) suggest, there are 6 different types of pitch accents in English — not only H*, L+H*, H*+L accents but L*, L*+H and H+L* accents[2], all of which can make the linguistic entity perceptually pitch-prominent. This wide variety of pitch accents in English suggests that it is possible to compare the f0 values of the stressed syllables of new and given linguistic entities only when they are accented with identical pitch accents, i.e. only when the stressed syllables have the same type of pitch accent. Further it follows that a simple measurement of the f0 value of the stressed syllable cannot reveal whether that syllable is pitch accented (or pitch-prominent) or not. This is another serious defect in the method adopted in Fowler & Housum's study.

Because of these methodological problems mentioned above, their claim that duration is the sole "reliable" cue distinguishing new and given entities leaves not a little room for doubt. With these problems in mind, in this paper, I will examine how linguistic entities of different informational status are phonetically cued by

[2] The * indicates that the tone associated to the star is linked to and realized at the stressed syllable.

speakers of Standard Korean. An attempt will be made, using necessary controls, to identify which phonetic cues are exploited by speakers of Standard Korean to distinguish new and given linguistic entities.

This paper has four specific sub-goals. The primary goal is, as mentioned above, to identify the phonetic cue(s) used by Standard Korean speakers to distinguish entities of new and given status. Since Standard Korean does not have a pitch accent system, I will consider f0 value, amplitude, duration and intonational phrasing as four possible cues and examine which of them are significant. The motivation to include intonational phrasing as one of the potential cues is provided by Jun's (1993) suggestion that given information and new information are likely to be produced with different intonational phrasing.

As suggested earlier and also by previous studies (e.g. Terken 1984, Brown 1983), speakers of various languages tend to use both phonetic and syntactic cues to distinguish given and new linguistic entities. The second sub-goal of this paper is the examination of the interaction between these two types of cues. I will examine whether phonetic cues are given by speakers of Standard Korean when a syntactic cue is provided for the identification of informational status of linguistic entities. This sub-goal is pursued in Study 2.

Brown & Yule (1983) further divide given entities into "current evoked entities" and "displaced evoked entities" based on how recently a given entity is introduced into the discourse. The third sub-goal is to examine whether there is any acoustic or prosodic basis in Brown & Yule's (1983) division of given entities into these two categories. This is examined in Study 3. The results of this investigation will be compared to Brown's (1983) study, which suggested that English speakers do not distinguish current and displaced evoked entities by pitch, though the distinction between the two may be marked by syntactic cues.

Jun (1993) claims that informational status interacts with other factors in affecting how Korean speakers intonationally phrase linguistic entities. She suggests that phonological weight of linguistic entities and the speaker's speech rate also play an important role in intonational phrasing. The examination of the interaction among these three factors is another sub-goal of this paper.

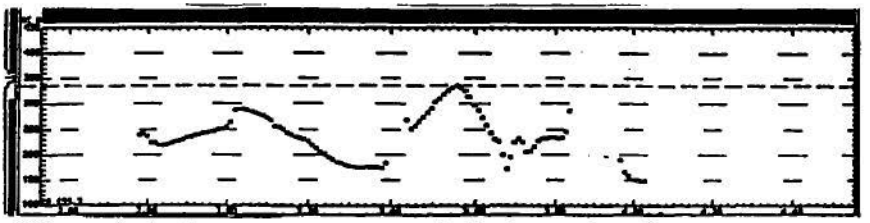
From the judgment that the use of natural speech data has much more significant problems than advantages for the purposes of this study and that the defects of a controlled experiment can be minimized with proper methods, three data sets were constructed and two controlled experiments were conducted. These experiments will be described in Section 3

2. A Brief Sketch of the Intonational Structure of Standard Korean

Before the detailed description of the two experiments in Section 3, a brief explanation of the intonational structure of Standard Korean seems to be in order because knowledge on the intonational structure of Standard Korean will be essential in understanding the method and results of the two experiments.

Intonation of Standard Korean is hierarchically organized like in other languages such as English (Pierrehumbert 1980), French (Hirst & di Cristo 1984, di Cristo 1978) or Japanese (Beckman & Pierrehumbert 1986). That is, a Standard Korean sentence consists of one or more intonational phrases; an intonational phrase usually consists of more than one accentual phrase; and an accentual phrase can have more than one word. Thus, the f0 contour of the intonational phrase is realized with the tonal patterns of one or more accentual phrases and the intonational phrase boundary tone.

The underlying tonal pattern of the accentual phrase in Standard Korean is LHLH[3] (Jun 1993). The first accentual phrase of the sentence in Figure 1 shows the typical tonal patterns of Standard Korean (The brackets in the Korean sentences in the figures below indicate that the word or phrase in the brackets forms one accentual phrase).

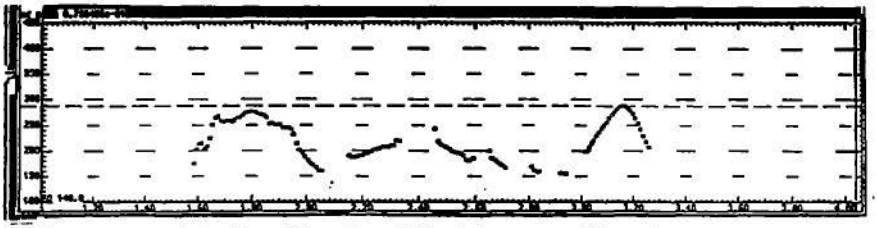


(Hz) {pukmi- san yəu- ka} {na-n coh -a}
North American-produced fox-Subj I-Top like-Decl
'I like North American foxes.'

L H L H L H L%

Figure 1: F0 contour of a sentence produced in two accentual phrases

However, the first H tone and the second L tone often undershoot when the accentual phrase is short (Lee 1989, Jun 1993) — i.e. in most cases when the accentual phrase consists of one to three syllables (sometimes four) as illustrated in Figure 2, where undershoot is observed in the first two accentual phrases of the sentence.



(Hz) {atamha-n}{pyəlcaŋ-il} {ci-ə poci kɨ-æ}
little-Adj P villa-Acc build why don't you
'Why don't you build a little villa?'

L H L H LH L HL%

Figure 2: Fo contour of a sentence whose first two accentual phrases have an undershoot of the first H tone

[3]For a somewhat different view, see de Jong (1989) and Lee (1989).

Further when an aspirated or glottalized consonant begins an accentual phrase, the first L tone is replaced by a H tone (Jun 1993) as shown in Figure 3.

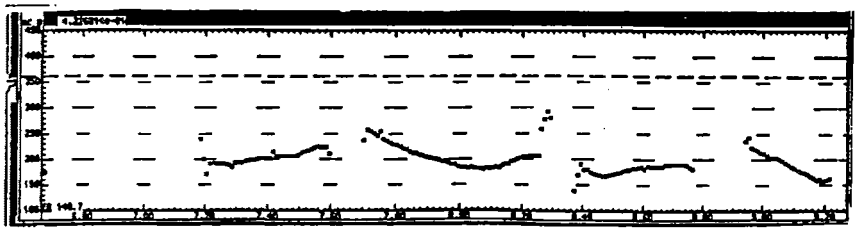


Figure 3: F0 contour of a sentence where H tones begin a new accentual phrases

Standard Korean has at least 6 intonational phrase boundary tones including L, H, LH, HL, LHL and HLH (Koo 1986, Jun 1993). When the accentual phrase boundary coincides with an intonational phrase boundary, the final H tone of the accentual phrase is preempted by an intonational phrase boundary tone (Jun 1993), as shown in Figure 2, where the accentual phrase final H tone is replaced by the intonational phrase boundary tone HL%; and in Figure 3, where the H tone of the second accentual phrase was preempted by boundary tone H% and the H tone of the last accentual phrase was replaced by boundary tone L%. The syllable where the intonational phrase boundary tone is realized becomes noticeably lengthened as in languages like English or French, and optionally followed by a pause (Koo 1986, Jun 1993).

3. Experiment 1

3.1 Materials

Study 1

In this study, I examine how new and given linguistic entities are produced acoustically and prosodically in Standard Korean. The new linguistic entity is, here, defined as a referring expression that introduces an entity into the discourse; and the given linguistic entity, as an expression that refers to the entity later in the discourse. The purpose of Study 1 is to identify which phonetic cue(s) Korean speakers use to distinguish new and given entities.

In Korean, a noun phrase usually appears without any determiner. Phrases like *cohin saɹam* "good man" and *cəlmin yəca* "young girl" are perfectly grammatical in Korean. Sometimes, however, the determiner *ki* "the" can precede the noun phrase and show that the following noun phrase is a given expression. That is, *ki* can function as a syntactic cue indicating that the following noun phrase is given information. As mentioned earlier, the scope of the present research is limited to the examination of referring expressions. The referring expressions in the corpus are all composed of one adjectival word and a noun. This is to examine Jun's (1993:199) suggestion that new information is apt to be produced in two

separate accentual phrases when they are composed of two words, while given information tends to form one accentual phrase.

This experiment, in addition, attempts to examine the interaction of the informational status of entities with those factors that Jun (1993) suggested affect accentual phrasing of linguistic entities — i.e. speech rate and phonological weight. As observed earlier, Jun (1993) claims that speech rate affects accentual phrasing. This claim is in line with the claim by Selkirk (1984) and Nespor & Vogel (1986) that speech rate affects the phrasing of intonational phrases and also with Vassiere's (1983) suggestion that speech rate influences the number of prosodic words in the utterance.

Jun also claims that a phrase tends to be more often produced in two accentual phrases as the phonological weight of the phrase becomes heavier, and that phrases whose phonological weight is heavier than 6 syllables are generally produced in two accentual phrases. In order to examine how the informational status of entities and the phonological weight factor affects accentual phrasing of the referring expressions, 9 four-turn dialogues were constructed where 4- 5- and 6-syllable referring expressions appear in the discourse both in new and given status attached by a grammatical particle. The 4-syllable referring expressions consist of a 2-syllable adjectival word + a 2-syllable noun, while the 5-syllable expressions and 6-syllable expressions were composed of a 3-syllable adjectival word + a 2-syllable noun and a 3-syllable adjectival word + a 3-syllable noun, respectively. These referring expressions are listed in Table 1.

No. of syllables	Phrase	Gloss
4	*nəlpɨn maɨm*	'broad mind'
4	*yep'i-n inhyəŋ*	'pretty doll'
4	*koun noɹæ*	'pretty song'
5	*pukmisan yəu*	'North-American fox'
5	*wantosan iŋə*	'Wanto-produced carps'
5	*atamhan pyəlcaŋ*	'little villa'
6	*siwənha-n əlimmul*	'cool icewater'
6	*kapyəun taliki*	'light running'
6	*səlikɨn panana*	'unripe banana'

Table 1. The list of the noun phrases used for study 1

For a reliable analysis of f0, each referring expression was constructed so that a majority of the segments could be sonorants. Since each referring expression forms a bigger phrase combined with a particle, the phrases have 5, 6 or 7 syllables as their phonological weight. A sample dialogue (where a 6-syllable phrase — 5-syllable referring expression + particle — appears) is given below.

A. ipən kaɨl-e-nɨn muənka-lil hæ po-ko sip^{h}-ɨnte
this fall-Loc-Top something-Obj do try-Adv P want to-Decl
"I want to do something this fall."

B. atamha-n pyəlcaŋ-il ci-ə po-ci kiɹæ?
little-Adj P villa-Obj build-Adv P why don't you
"Why don't you build a little villa?"

A. kɨkə kwenc^{h}anh-ɨn sæŋkak-i-nte.
that good-Adj P idea-Cop-Int
"That sounds like a good idea."

B. atamha-n pyəlcaŋ-i iss-imyən ne maim-to p^hukinha-lkəya.
little-Adj P villa-Subj present-if your heart-also warm-Decl
"If you have a little villa, your heart will also become warm (and cosy)."
(P: particle)

An attempt was made to distinguish focus from new information. This is because new information is not identical to focus in its narrow sense. Dialogues were constructed so that the new linguistic entities do not appear in the discourse as an answer to a wh-question. Care was also taken so that given linguistic entities do not receive any contrastive focus in the dialogue. The sentential position where new and given entities appear was controlled for subject position only, which would enable us to compare f0 value, amplitude and duration of a new entity and its given counterpart. The dialogues constructed for Study 1 are attached as Appendix 1.

Study 2

In this study, I investigate how the same referent is produced acoustically and prosodically in its occurrence as a new and a given entity when a syntactic cue is already given by the speaker. The referent is introduced into the discourse in the form *han* 'a' + noun and referred to later with determiner *ki* 'the' + noun. Only the 2-syllable nouns were chosen for this study. The 6 nouns used for Study 2 are listed in Table 2. For this study, 6 pairs of three-turn dialogue were constructed. Example dialogues are given below:

as a new entity

B. na yocim noɹæ hana-l mantil-ko iss-ə.
I nowadays song one-Obj make-Adv P Aux-Decl
"I am writing a song these days."

A. ət'ə-n noɹæ-nte?
what kind of song-Int
"What kind of song is it?"

B. han inə-ka waŋca-eke saɹaŋ-il p^hyohyənha-nin noɹæ-ya.
a mermaid-Subj prince-Dat love-Obj express-Adj P song-Decl
"A mermaid expresses her love for a prince in that song."

as a given entity

B. na yocim han inə-e-tæhan noɹæ-l mantil-ko iss-e.
I nowadays a mermaid-about song-Obj make-Adv P Aux-Decl
"I am writing a song about a mermaid these days."

A. ət'ə-n næyoŋ-i-nte?
what content-Cop-Int
"What is the content of the song like?"

B. ki inə-ka waŋca-eke saɹaŋ-il p^hyohyənha-nin noɹæ-ya.
the mermaid-Subj prince-Dat love-Obj express-Adj P song-Decl
"The mermaid expresses her love for a prince in that song."

As in the first corpus, the new and the given expression appear only at the subject position of the sentence. The dialogues constructed for Study 2 are attached as Appendix 2.

word	gloss
inə	'mermaid'
mæŋin	'blind man'
yəŋuŋ	'hero'
kunin	'soldier'
yəu	'fox'
manyə	'witch'

Table 2. The list of nouns used for study 2

3.2 Methods

Subjects

Three male and three female native speakers of Seoul Korean participated in the experiment. The subjects were all in their late twenties or early thirties. The three male speakers were OSU graduate students majoring in social or biological sciences. One female speaker was a linguistics graduate student and the other two female speakers had master degrees in other areas but were not students at the time of the experiment. All the speakers had fairly close friendships of at least a year's standing with the author. All were naive to the purpose of the experiment.

Procedures

Recordings were made in a sound-treated booth in the Linguistics Laboratory at the Linguistics Department of OSU. The constructed dialogues for Study 1 and Study 2 were 9 and 12 respectively. 18 foil dialogues were also constructed. Each of these dialogues was written on a card. The cards were randomized. There was one reading session before the actual recording. The subject was asked to read the B sentences trying to understand the content of the dialogue while the author read the A sentences (cf. Appendix 1, 2). This session was devised to make the subject understand the contents of the dialogues and make the recording session approximate a conversational situation. Then the following two reading sessions were recorded. The subjects were asked to read as if they were engaged in a real conversation. When the subjects made an error in their reading, they were not asked to reread. This was because speakers are apt to emphasize what they produced wrongly in their second production. For the same reason, self-corrected items were not included either as data for analysis.

Among the recorded sentences, those of interest were digitized. Measurements were made using the Waves program (Version 5.0) developed by Entropics Inc. First of all, the intonational pattern of the sentence in which a linguistic entity of interest appears was analyzed. The general intonational and accentual phrasing was observed. And then the accentual phrasing of the linguistic entity was examined and also the existence of a boundary tone at the end of the entity was checked. Duration was measured using wide band spectrograms. When the expression begins with a stop, its duration was measured from the release of the closure. For Study 1, the duration of the noun phrase excluding the particle (i.e. adjectival + noun) was measured. For Study 2, durations of the nouns were measured and compared. This was because there is an inherent difference in duration among the particles and also between two determiners *han* and *ki*.

As observed earlier, previous work has suggested that in languages such as English (Klatt 1976) and French (Benguerel 1970), the last stressed vowel of the

intonational phrase is significantly lengthened. Jun (1993:38) suggests that in Korean too the last syllable of the intonational phrase is lengthened. However, the current data contain instances where not only the last syllable but the penultimate syllable in the intonational phrase is lengthened. What was observed in the data is that some intonational phrase boundaries are prosodically marked more clearly than others. There was much variation in the peak f0 value of the H or HL boundary tone. In other words, Some H or HL boundary tones were realized with higher f0 than others (see Koo 1986 for the variation in the f0 value of H boundary tones in Korean).

Likewise the lengthening of the last syllable of the intonational phrases was not always comparable. That is, the lengthening of the last syllable of the intonational phrase was variable except that the last syllable was substantially longer than the other syllables in the intonational phrase. The impression was that sometimes the last vowel of the intonational phrase was lengthened more than two times its normal duration and sometimes the lengthening occurred only about one half times the normal duration of the vowel. The data suggest that the lengthening of the penultimate syllable in the intonational phrase occurs when the speaker marks the intonational phrase boundary 'very' clearly. This variation of the final lengthening at the end of an intonational phrase in Standard Korean is in line with Vassiere's (1983:61) observation that "phrase-final lengthening" can be realized in different manners in different languages. Accordingly, I decided not to compare those pairs of expressions which were produced with an intonational phrase boundary either in new or given status. This decision was made to prevent the lengthening influence of the intonational phrase boundary from distorting the results of the analysis.

It was observed earlier that the underlying tonal pattern of the accentual phrase in Standard Korean is LHLH (Jun 1993:42), but that the first H tone and the second L tone often undershoot when the accentual phrase is short — i.e. when the accentual phrase consists of one to three syllables (Jun 1993:43). It was also observed that the final H tone of the accentual phrase is preempted by an intonational phrase boundary tone when the accentual phrase boundary coincides with the intonational phrase boundary. Since the subjects occasionally made an intonational phrase break and marked the phrase of interest with a boundary tone, the comparison of the f0 values of the final H tone of the phrase was not possible. This is because the f0 value of the H boundary tone is significantly higher than that of the final H tone of an accentual phrase and also because there was much variation (as suggested earlier) across the peak f0 values across H or HL boundary tones.

Accordingly, when both phrases (given phrase and new phrase) were produced in one accentual phrase, the f0 values of the first H tones of the accentual phrases were compared (cf. Figure 4a). When the phrases were produced in two accentual phrases, the f0 values of the phrase-final H tones of the first accentual phrases were compared (cf. Figure 4b: the underlying first H tone was not realized in the data because the phrase was not long enough — i.e. 1 to 3 syllables). This latter comparison was possible because the adjectival word (in Study 1) and the determiner (in Study 2) were never marked with a boundary tone in the data. Needless to say, the f0 values were compared only when accentual phrasing was identical between the new entity and its given counterpart. The decision as to whether the phrase was produced in one accentual phrase is based on my perception as a native speaker of Seoul Korean and also on the f0 contour. The most important cue in the f0 contour is the slope of the f0 fall from the first H tone. The slope is much steeper when the phrase is produced in two accentual phrases than when produced in one accentual phrase (cf. Jun 1993).

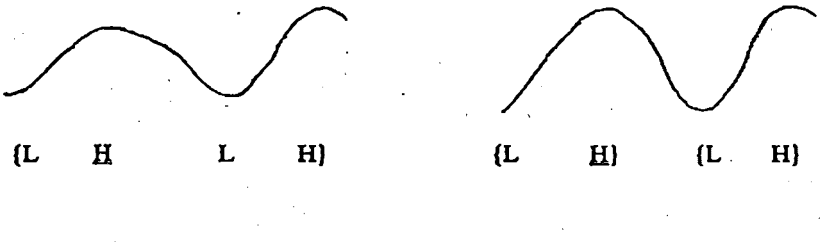


Figure 4: The H tones measured (the phrase-initial H tone, when phrases were produced in one accentual phrase (4a); the phrase-final H tone, when phrases were produced in two accentual phrases (4b))

Average intensity (i.e. average intensity with which the whole referring expression was spoken) was used for intensity measures. Average intensity was calculated using a program written by Mary Beckman. It was found through the examination of the data that the existence of a boundary tone exerted little — if any — influence on the intensity the linguistic entity was produced with. Accordingly, all the tokens were available for the comparison, regardless of whether a boundary tone followed the token or not.

For the calculation of the approximate speech rate of each speaker, 20 sentences were chosen. The chosen sentences were 10 from the data for Study 1 and 10 from the data for Study 2. Identical sentences were selected across speakers. The speech rate was calculated by dividing the duration of the sentence by the number of the syllables in the sentence.

3.3 Results of Study 1

The number of the comparable pairs of new and given entities was 84 in duration, 85 in f0 and 104 in amplitude. Table 3 shows the mean duration values of the new and given expressions according to the number of syllables the expressions consist of. The new expression was longer than its given counterpart 75 percent of the time (63/84). As the number of syllables increases, the difference between new and given expressions becomes larger — probably because there is more room for shortening for longer expressions as Fowler & Housum (1987) suggested.

	4		5		6	
Speaker	New	Given	New	Given	New	Given
CK	660	597	767	717	860	798
YEJ	542	540	703	657	772	717
PYJ	--	--	761	723	787	787
LHS	517	482	650	638	738	687
LSH	513	478	654	630	712	670
CDS	633	687	863	802	953	865
Average (ms)	551	540	732	694	796	743

Table 3. Duration of new and given expressions with different numbers of syllables

Table 4 shows the mean f0 values of the first H tone (whether it is a high tone that occurs medially or finally in the accentual phrase) of the new and given expressions. The new expressions were produced in a higher f0 than their given counterparts 67.1% percent of the time (57/85).

Speaker	Sex	New	Given
CK	F	338.73	324.18
YEJ	F	306.56	307.29
PYJ	F	299.41	285.47
Average (Hz)		316.84	306.12
LHS	M	168.36	151.05
LSH	M	138.82	136.86
CDS	M	186.51	170.92
Average (Hz)		163.24	153.02

Table 4. Measurements of f0 of new and given expressions

The average amplitudes with which the phrases were spoken are given in Table 5. The new expressions were produced with more average intensity than their given counterparts 64.4% percent of the time (67/104).

Speaker	New	Given
CK	663.45	673.27
YEJ	662.94	637.61
PYJ	537.04	482.58
LHS	582.24	559.76
LSH	705.24	666.12
CDS	725.53	693.94
Average (rms unit)	649.95	622.81

Table 5. Measurements of average amplitude of new and given expressions

New and given expressions also showed quite different patterns of accentual phrasing. The new expressions were produced in two accentual phrases 46.1% of the time (47/102), while the given expressions were produced likewise 31.7% of the time (33/104). A χ^2 test was performed to examine how significant the difference between the two types of expressions is. The difference was significant at .05 level (χ^2=3.981, df=1, p<.05).

A paired t-test was performed to see whether there is a significant difference in the mean duration, f0 and average amplitude between the new expressions and their counterparts. Duration, f0 and average amplitude were all found to be significantly different (duration: (T=5.74, df=83, p<0.0005), f0: (T= 3.84, df=84, p<0.0005), average amplitude: (T=2.62, df=103, p=.01)). A paired t-test also found the difference in accentual phrasing between new phrases and their given counterparts to be significantly different (T=4.04, df=103, p<0.0005).

Jun's (1993:180) claim that phonological weight (number of syllables in a phrase) is one of the important factors on how speakers accentually phrase expressions was generally supported by the results. While 7-syllable phrases (including the particle) and 6-syllable phrases were produced in two accentual phrases 66.7 (48/72) and 44.1 (30/68) percent of the time respectively, 5 word phrases were produced in two accentual phrases only 2.9 (2/68) percent of the time.

Speaker	Percentage
CK	32.4% (11/34)
YEJ	55.6% (20/36)
PYJ	47.1% (16/34)
LHS	47.1% (16/34)
LSH	19.4% (7/36)
CDS	29.4% (10/34)

Table 6. Speakers' frequencies of producing the expressions in two accentual phrases

There was a major difference in the patterns of accentual phrasing across speakers, as Table 6 suggests. Significant cross-speaker variation was observed. While speaker YEJ produced the phrases in two accentual phrases 55.6% of the time, speaker LSH produced the phrases in two accentual phrases only 19.4% of the time.

3.4. Results of Study 2

As mentioned earlier, when consonants such as aspirated or glottalized obstruents or a glottal fricative /h/ begins an accentual phrase, the accentual phrase begins in a H tone (Jun 1993:42). This means that while the new phrase (i.e. *han* phrase) begins in a H tone, the given phrase (*ki* phrase) starts in a L tone. Together with the fact that different segments make up the two different determiners (*han* and *ki*) — most importantly, there is an inherent difference in f0 value between high vowels and low vowels (Lehiste & Peterson 1961) — this suggests that the comparison of the f0 value of the first H tone is not possible. Accordingly only the duration of the noun, average amplitude and accentual phrasing were measured and examined for Study 2. The number of comparable pairs was 61 in duration, 63 in average amplitude and 68 in accentual phrasing.

The duration of the noun showed no difference as a function of informational status. The new 'noun' was longer than the given noun 50.8% of the time (31/61) but the average duration of the new nouns was not longer than that of the given nouns (Table 7). The paired t-test found the difference to be minimal (T=.189, df=60, p=.855).

Speaker	New	Given
CK	358	340
YEJ	304	323
PYJ	342	338
LHS	366	359
LSH	241	249
CDS	343	338
Average (ms)	324 (N=61)	325 (N=61)

Table 7. Measurements of duration of new and given nouns

The speakers didn't produce the new noun with greater average intensity either. The new noun was spoken with greater average intensity only 42.9% of the time (27/63). As shown in Table 8, the average intensity with which new nouns were produced was less than their counterparts. The difference was not significant either (T=.533, df=62, p=.600).

Speaker	New	Given
CK	699	719
YEJ	657	640
PYJ	581	568
LHS	564	658
LSH	719	735
CDS	777	766
Average (rms unit)	667 (N=63)	681 (N=63)

Table 8. Measurements of average amplitude of new and given nouns

However, a significant difference was observed in accentual phrasing between new and given phrases. While given phrases (*ki* phrases) were produced in two accentual phrases 33.8% of the time (23/68), new phrases (*han* phrases) were produced likewise 72.1% of the time (49/68). Though the phrases were all composed of 4 syllables (including the particle), they were produced in two accentual phrases 52.9% of the time (72/136). A clear difference across speakers in accentual phrasing was again observed (Table 9).

Speaker	Percentage
CK	80% (16/20)
YEJ	65% (13/20)
PYJ	58% (14/24)
LHS	29% (7/24)
LSH	29% (7/24)
CDS	63% (15/24)

Table 9. Speakers' frequencies of producing the phrases in two accentual phrases

3.5 Discussion

Unlike Fowler & Housum's (1987) study, Study 1 finds a significant mean difference not only in duration but also in f0 value and average amplitude. This result suggests that duration, f0 value and amplitude are all phonetic correlates of informational status in Standard Korean and contribute to how speakers of Standard Korean distinguish linguistic entities of these two different informational statuses. Differences in results between the present research and Fowler & Housum's (1987) study might come from the factor that the latter researchers didn't control sentential positions and intonational patterns of linguistic entities when they compared f0 and average amplitude of new and old expressions. Or this difference might possibly come from cross-linguistic differences. Only future studies on English that compare new and given linguistic entities with necessary controls will be able to give the answer.

Another important thing to note is the role of accentual phrasing in distinguishing new and given information in Standard Korean. In Study 1, the paired t-test found a significant difference in accentual phrasing between the two informational types of expressions. In Study 2, accentual phrasing was the only phonetic cue that distinguished new information from given information.

The results of Study 2 suggest that duration and amplitude do not play a role in distinguishing a new word from a given word when a syntactic cue is given for this purpose. It is very interesting that Korean speakers use not duration or amplitude but accentual phrasing as a complement to a syntactic cue. This result

supports Jun's (1993:199) claim that given information in the discourse is more likely to be produced in one accentual phrase.

Phonological weight showed a significant influence on accentual phrasing in Study 1, which supports Jun's (1993) suggestion that the length of a phrase is an important factor affecting whether that phrase is spoken in one accentual phrase or in two accentual phrases. However, Jun's (1993:180) claim that a potential accentual phrase that consists of more than 5 syllables tends to be phrased as two was not supported by the results for Study 1. The 6-syllable sequences were produced in two accentual phrases only 44.1 percent of the time. This suggests that at least in speech close to conversational speech, 6-syllable phrases are produced in one accentual phrase a majority of the time.

However, it doesn't seem to be the case that phonological weight always plays a crucial role. Though the new and given linguistic entities were all 4-syllable phrases in Study 2, they were spoken in two accentual phrases 52.9% of the time (72/136). This frequency is even higher than the frequency with which the 5- and 6- syllable phrases were produced in two accentual phrases in Study 1 (2.9%, 30% respectively). This peculiar behavior of *han* and *ki* phrases seems to come from the fact that these two determiners perform a function of cuing informational status of the following noun — or the referent. In some sense, we might say that the semantic weights (see Bolinger 1972, Jun 1993) of these determiners are heavy. The patterns of accentual phrasing of the *han* and *ki* phrases in Study 2 suggest that the phonological weight factor can be overridden when accentual phrasing is the only phonetic cue that shows the informational status of phrases.

The speech rate of each speaker showed a relatively high correlation to how often the speaker produces the phrases in two accentual phrases (r=.729), as Table 10 suggests. This correlation was marginally significant (df=4, p=.10). However, the slowest speaker (CDS), a male speaker, was only the fourth following the three female speakers in the order of frequency of producing the phrases in two accentual phrases. Further among the three female speakers the speech rate was inversely proportional to the rate of producing the phrases in two accentual phrases. This result does not allow us to reach any conclusion at the present time.

The results shown in Table 10 make another suggestion. Though our samples are not representative samples of the two gender populations, one possible interpretation of the result is that the female speakers may be more apt to produce the phrases in two accentual phrase than the male speakers. This, in turn, might suggest that female speakers of Standard Korean speak producing more accentual phrases than male speakers of Standard Korean, i.e. with more intonational contours than male speakers. This interpretation agrees to the results of various studies that suggested women's speech involve more intonational contours and rapid pitch shifts (McConnel-Ginnet 1983, Fichtelius, Hohansson & Nordin 1980, Terango 1966) However, a much more extensive sociolinguistic study would be needed to support this interpretation.

Speaker	Sex	Speech Rate (ms/syl)	Percentage
LSH	M	117	23.3% (14/60)
LHS	M	138	39.7% (23/58)
YEJ	F	154	58.9% (33/56)
PYJ	F	162.6	51.7% (30/58)
CK	F	163.2	50.0% (27/54)
CDS	M	175	43.1% (25/58)

Table 10. Speech rate and frequency of producing the phrases in two accentual phrases

4. Experiment 2

Study 3

Brown (1983), Yule (1980, 1981) and Brown & Yule (1983) classify the textually given entities — i.e. entities that were already introduced in the previous discourse and reappear — into current evoked entities and displaced evoked entities. As Chafe (1972:50) observes, a given entity is "foregrounded" at one point in a discourse but later it slips out of the foreground of the discourse participants' consciousness as other entities are introduced and discussed. Thus the "psychological" status of an entity that has just been introduced in the discourse cannot be identical to that of the one that was introduced earlier in the discourse. Brown and Yule's division of given entities into current and displaced evoked entities can be understood as an attempt to distinguish these two different psychological statuses.

Then the question is whether and how the difference between these two types of given entities is reflected in speakers' production. One research issue is whether the two types of given entities are produced acoustically and prosodically in a different manner. Brown (1983) suggested in her study on English that the current entity and the displaced entity are not produced differently in terms of pitch, though they are apt to be produced differently syntactically. The purpose of Experiment 2 is to examine how new, current and displaced entities are produced phonetically by Standard Korean speakers. Since we have already observed how speakers of Standard Korean distinguish new vs. given entities, the focus of the study will be to investigate to what degree the phonetic realizations of current and displaced entities are different. In addition, the role of informational status, phonological weight and speech rate on the speakers' pattern of accentual phrasing is reexamined here. Brown (1983:75) defines a current evoked entity as "an item which has just been introduced into the discourse and which is currently the entity to which new information is being related" and a displaced evoked entity as an item "which has been introduced into the discourse at a point previous to the currently evoked item". I will adopt her definitions in this study.

4.1 Materials

As the material for Experiment 2, I decided to use a narrative rather than a dialogue. The main reason for this decision was that a narrative is a genre of discourse where the same referring expressions can appear in the text very naturally. Also it was observed that the investigator is able to control the speaker's use of f0, amplitude and duration for other purposes noted earlier (e.g. for focal or contrastive purposes, or for holding the floor or for directing the flow of information) better in narrative speech. This is primarily due to the fact that narrative speech is unidirectional speech (i.e. from the speaker to the listener) that involves less interaction with the listener, while dialogue speech is bi-directional involving much more interaction. Another reason for the choice of a narrative was to elicit more formal, slow speech data from the speakers in this experiment. It was expected that a more careful, slow style of speech can be elicited by having the subject read the narrative. The narrative constructed for this experiment and its English translation are given in Appendix 3, where four triplets of a new entity, a current evoked entity and a displaced evoked entity appear.

In the narrative, as soon as the sentence which is initiated by a new 'phrase' is finished, the current evoked phrase starts the next sentence. After three sentences of relatively comparable lengths the displaced evoked phrase appears in the

discourse. Efforts were made to minimize the effects of discourse structure, which is known to affect especially the pitch of speakers' production at the beginning of a discourse segment (Grosz & Hirschberg 1992, Hirschberg & Pierrehumbert 1986, Yule 1980). The narrative was constructed so that new expressions do not appear at the beginning of a discourse segment. Efforts were also made that the expressions do not receive any special emphasis (e.g. focal or contrastive emphasis) in the discourse. The constructed expressions were two 4-syllable and two 5-syllable noun phrases. Accordingly, the phonological weights of the phrases were 5 and 6 syllables including the particle attached to the noun phrase. The constructed linguistic entities are listed in Table 11.

No. of syllables	Entity	Gloss
4	yepɨn yəin	'pretty woman'
4	kəmɨn ɨji	'black wolf'
5	yəpmail chəŋnyən	'neighbor-village young-man'
5	nuɹən koyaŋi	'yellow cat'

Table 11. The list of the expressions used for study 3

4.2 Methods

The same 6 speakers participated in Experiment 2. The procedure for the recording was as follows. I first outlined the content of the narrative for the subject. Then there was one practice reading session. The subject was asked to read the narrative trying to understand the content of the narrative. The subjects were asked to read the narrative naturally and vividly as if they actually read the narrative to a listener. They were encouraged to think of the author as a listener. The next two readings were recorded and those sentences of interest were digitized. Measurements were made again using the Entropics Waves program (Version 5.0).

The identical method used in Study 1 and 2 was used in Study 3 for the comparison of duration of the expressions. That is, the duration of the noun phrase (adjectival + noun) excluding that of the particle was measured. Also duration was compared only among those triplets of entities that were produced without a boundary tone at the end in any informational status. The comparison of f0 was also conducted in the identical manner. The f0 values of the first H tone during the production of the expression were compared.

16 identical sentences — 8 from the first reading and 8 from the second reading — were selected for the calculation of speech rate of each speaker in this experiment. Speech rate was calculated in the same method as in Experiment 1.

4.3 Results

34 and 35 triplets were available for the comparison of duration and f0 values, respectively. 47 triplets were used for the comparison of average amplitude and accentual phrasing. Table 12, 13 and 14 show the mean values of f0, average amplitude and duration of expressions of three different informational statuses as produced by the subjects. Table 15 gives the frequency in which the expressions of different informational statuses were produced in two accentual phrases.

If new, current and displaced entities have different informational statuses, it is expected that new expressions be produced with higher f0, greater average amplitude and longer duration than displaced and current expressions, and that current expreessions be spoken with lower f0, less average amplitude and shorter

duration than displaced expressions. The results were interpreted in this perspective.

Speaker	Sex	New	Current	Displaced
CK	F	283	245	262
YEJ	F	283	248	271
PYJ	F	232	220	243
Average (Hz)		267	236	259
LHS	M	148	134	139
LSH	M	139	133	139
CDS	M	168	153	164
Average (Hz)		152	139	147

Table 12. Measurements of f0 of the expressions in three different informational statuses

Speaker	New	Current	Displaced
CK	677	588	624
YEJ	699	596	658
PYJ	676	640	714
LHS	660	484	508
LSH	718	615	719
CDS	733	624	721
Average (rms unit)	695	593	656

Table 13. Average Amplitude of the expressions in three different informational statuses

Speaker	New	Current	Displaced
CK	711	672	648
YEJ	632	583	613
PYJ	743	723	683
LHS	646	590	606
LSH	577	543	580
CDS	735	620	623
Average (ms)	672	623	628

Table 14. Measurements of duration in the expressions of three different informational statuses

As expected, the speakers clearly distinguished new entities from current entities. Paired t-tests showed that the average values of three of the four phonetic cues — i.e. duration, f0 value and average amplitude — were significantly different between new and current entities — f0 ($T=5.589$, $df=34$, $p<.0005$), duration ($T=6.49$, $df=33$, $p<.0005$), average amplitude ($T=3.638$, $df=46$, $p=.001$). The expressions were produced in one accentual phrase more often in current status than in new status but not significantly ($T=.618$, $df=46$, $p=.533$)

Speaker	New	Current	Displaced
CK	3/8	3/8	2/8
YEJ	6/8	6/8	6/8
PYJ	4/7	4/7	4/7
LHS	4/8	2/8	4/8
LSH	1/8	1/8	3/8
CDS	2/8	2/8	2/8
Average	20/47: 43%	18/47: 38%	21/47: 45%

Table 15. Frequency of producing the expressions in two accentual phrases

The phonetic distinctions between current and displaced entities were relatively less clear than those between new and current entities. F0 and average amplitude were found by paired t-tests to be significantly different. However, the average duration of displaced expressions was not significantly longer than that of current expressions (T=1.21, df=31, p=.237). The difference in accentual phrasing was also not significant (T=1.00, df=46, p=.323).

The distinctions between new and displaced entities were also not as clear as those between new and current entities. Paired t-tests found duration and f0 as significantly different. Duration was different at .0005 level (T=4.37, df=41) and f0 was different at .05 level (T=2.10, df=42). The difference in average amplitude between new and displaced entities was marginally significant (T=1.73, df=46, p=.091). Against the expectation, the displaced entities were produced in two accentual phrases one more time than the new entities (21/47 vs. 20/47). However, the difference was minimal. Table 16 shows the frequency in which these three different types of entities were produced in accordance with the aforementioned prediction.

	Duration	F0	Amplitude
new vs. current	91.1% (31/34)	88.6% (31/35)	74.5% (35/47)
displaced vs. current	53.1% (17/32)	71.4% (25/35)	72.3% (34/47)
new vs. displaced	78.6% (33/42)	60.5% (26/43)	51.1% (24/47)

Table 16. Frequency in which speakers produce the expressions of three different informational statuses as expected

Though accentual phrasing did not reflect different informational statuses very reliably, the speakers' pattern of accentual phrasing varied significantly according to the phonological weights of the expressions. While the 6-syllable phrases were spoken in two accentual phrases 63.9% of the time, the 5-syllable phrases were produced likewise only 18.9% of the time (Table 16). The χ^2 test found the difference significant (χ^2=29.38, df=1, p<.001). The speakers produced the expressions in two accentual phrases more frequently than in Study 1. This is clearly shown by Table 17, which compares the accentual phrasing of the 5- and 6-syllable phrases of Study 1 with that of Study 3.

	Dialogue	Narrative
5-syllable phrase	2.9% (2/68)	18.9% (13/69)
6-syllable phrase	44.1% (30/68)	63.9% (46/72)

Table 17. Accentual phrasing of phrases with two different phonological weights

4.4 Discussion

Though the difference in duration between the displaced entities and current entities missed significance (p=.237), the result that the displaced entities were produced with a significantly higher average f0 and a significantly greater average intensity than the current entities seems to support and justify Brown and Yule's division of given information into current vs. displaced evoked entities. The results show that speakers of Standard Korean distinguish phonetically not only new vs. given entities but current vs. displaced entities. This, in turn, supports the claim that these three different types of entities (new, current and displaced) have independent psychological status.

The results for Experiment 2 are significantly different from those for Brown's (1983) study, which did not find any significant f0 difference between current and displaced entities. Rather the results of the present study support Chafe's (1972:51) observation that a foregrounded entity is produced with lower pitch and less amplitude than the entity not foregrounded. This difference in results between Brown's study and the present study again could come from some different sources. First, like Fowler & Housum's (1987) study, Brown didn't control the sentential position and intonational phrasing of linguistic entities under study, which can be a serious confounding factor. Secondly, this difference might come from different intonational structures of English and Standard Korean. As observed earlier, the fact that English has L*, L*+H and H+L* pitch accents in addition to H*, L+H* and H*+L accents could have been a factor in Brown's finding. Another possible factor is that in her study, new and displaced entities had significantly different syntactic realizations. While the displaced entities appeared exclusively as either *the + adjectival + noun* or *the + noun*, the current entities occurred in these syntactic forms only 24% of the time. It seems possible that Brown's finding that the displaced entities were not produced with pitch prominence might come from the fact that the syntactic cue is already given to distinguish the two different types of given entities.

In this study too, the phonological weight of the phrase significantly influenced how speakers accentually phrase the expressions (Table 17). Jun's claim that speakers generally produce the phrases longer than 5 syllables in two accentual phrases was better supported by the results for Experiment 2 than those for Experiment 1.

As expected, the speakers' speech rate was generally slower than in Experiment 1 (Table 18). Four of the speakers read the narrative more slowly than the dialogues. But the speakers did not show a major difference in speech rate in these two types of data. The mean speech rate of the 6 speakers was 151.6 ms/syl in the dialogue data and 157.1 ms/syl in the narrative data. A paired t-test found the difference between the speech rates of each speaker in the two experiments not to be significant (T=.731, df=5, p=.497). Considering a significant difference in accentual phrasing between the two studies shown in Table 17, this result suggests that not only speech rate but the genre (or type) of discourse also affects how the speaker produces his/her speech intonationally. This interpretation seems plausible because it is often observed that a narrator recites the story with slightly exaggerated intonational contours.

Unlike in Experiment 1, speech rate showed no correlation with the accentual phrasing pattern (r= –.021). I interpret this result as implying that the speech rate factor in accentual phrasing applies intra-individually rather than inter-individually. In other words, the same speaker will produce more accentual phrases if s/he speaks faster, but it does not seem to be the case that a slow speaker necessarily produces more accentual phrases than a fast speaker. It is apparent that

Speaker	Sex	Speech Rate (ms/syl)	Frequency
LSH	M	138.6	20.8% (5/24)
YEJ	F	141.8	75.0% (18/24)
CDS	M	154.1	25.0% (6/24)
LHS	M	162.9	41.7% (10/24)
PYJ	F	169.8	57.1% (12/21)
CK	F	175.6	33.3% (8/24)

Table 18. Each speaker' speech rate and frequency of producing the expressions in two accentual phrases

some speakers have an idiolectal habit of producing sentences making more accentual phrases than others. In this experiment too, the female speakers produced more accentual phrases than the male speakers.

In this experiment, accentual phrasing was not a good indicator of informational status of the expressions. It didn't show much variation across the expressions of different informational statuses. Still the notable point is that new expressions were produced more frequently in two accentual phrases than the current expressions and that the displaced expressions were more often produced in two accentual phrases than the current expressions. That is, the results show the expected trend that the entities 'foregrounded' (current evoked entities) are more often produced in one accentual phrase than the entities 'in the background' (new and displaced entities).

However, it cannot be claimed that the results for Study 3 fully support the findings in Study 1 and Study 2. Nevertheless, since Study 1 and 2 showed a strong indication that accentual phrasing is part of the cues that distinguish different informational statuses, I interpret the combined results for the three studies as suggesting that in Standard Korean, accentual phrasing is one of the cues that distinguish new and given information. It seems to be sensible to interpret the results for the three studies as follows. Intonational phrasing sometimes plays a crucial role as a prosodic cue to distinguish linguistic entities of different informational statuses. But it is rather doubtful whether it is always an important cue like the other phonetic cues. It seems to be that sometimes intonational phrasing plays only a complementary role to the other phonetic cues or a syntactic cue.

5. General Discussion — 'Intonational Attenuation'

Past studies have identified f0, duration and intensity as possible phonetic correlates of prominence. However, Vassiere (1983) and Beckman (1986) suggest cross-linguistic differences in these phonetic correlates of prominence. What they suggest is that different languages could use different strategies for prominence purposes. Some languages might use f0 exclusively; some other languages might use both f0 and duration; and still other languages might use all these features (f0, duration and amplitude) for prominence purposes. Vassiere (1983:65) states that while f0, duration and intensity show a close correlation in an accented syllable in English, this isn't necessarily the case in French. Behne (1989) also suggests that English and French do not share the identical phonetic correlates of focal emphasis. These cross-linguistic differences will be closely related to the nature of the prosodic system each language has — i.e. whether that language is a stress language, whether that language has a pitch accent system (and what type of pitch accents), and which type of prosodic and intonational structure the language has. The results for the two experiments of the present research suggest that all of the

features mentioned above — f0, duration and amplitude — are used for prominence purposes in Standard Korean.

But the way Standard Korean takes advantage of f0 movement for a prominence purpose seems to be different from pitch accent languages like English or Dutch. While the latter languages mainly use an f0 movement on the accented syllable(s) of the linguistic entity for prominence, Standard Korean uses the f0 movement over the whole linguistic entity for a prominence purpose. This use of f0 movement for this purpose is directly connected to how a linguistic entity is intonationally phrased — accentually phrased, to be specific.

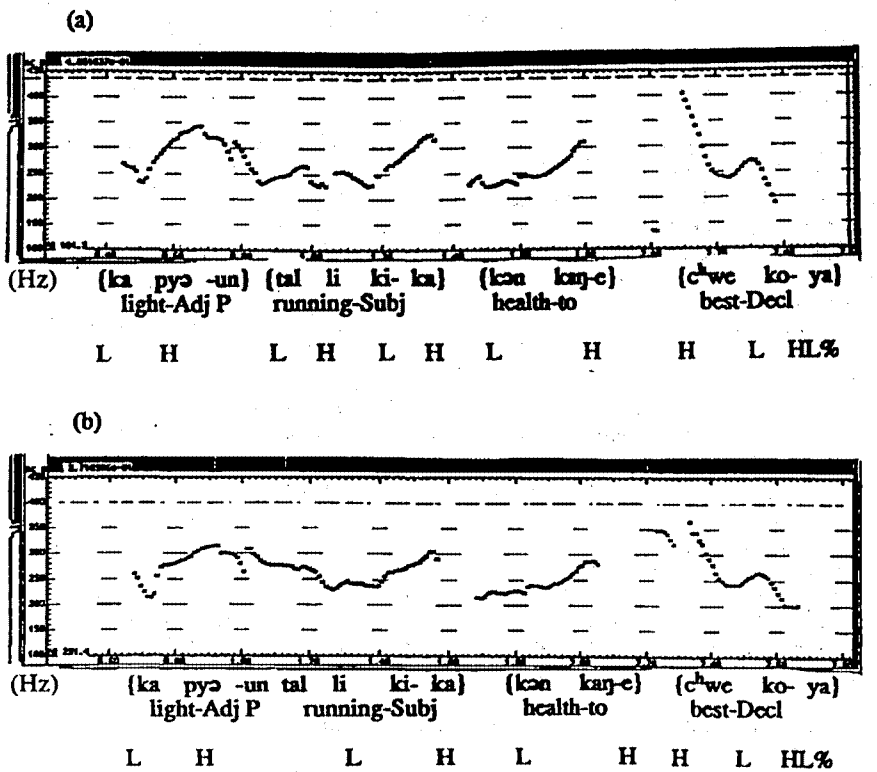


Figure 5: F0 contours of the sentence *kapyəu-n talikika kəŋkaŋe cʰwekoya* 'Light running is the best to health' when produced in two accentual phrases (5a) and in one accentual phrase (5b)

When an expression is produced in two accentual phrases in Standard Korean, it is perceptually more salient than when it is produced in one accentual phrase. It is because the production of the expression is realized with a more rapid and variable pitch movement. This is illustrated in Figure 5, where 5a and 5b, respectively, shows the f0 contour when the expression is produced in two accentual phrases and when it is produced in one accentual phrase.

The exploitation of accentual phrasing for a prominence purpose does not seem to be unique to Standard Korean. Vassiere (1983:60) suggests a similar phenomenon in such languages as French and Shanghai, a Chinese dialect. It is predicted that some other languages with similar intonational structures to that of Standard Korean use this strategy.

Standard Korean speakers seem to use higher f0, longer duration, greater intensity along with a more distinctive pitch movement for the emphasis of new information. But when the speaker assumes the information to be 'given' and readily available to the listener, the speaker seems to attenuate the expression that refers to the entity acoustically and prosodically. I suggest that producing the expression in one accentual phrase is part of 'phonetic attenuation' Chafe (1972) discusses, which I will refer to as 'intonational attenuation'. This rather unique form of attenuation is made by a simplification of f0 movement.

6. Conclusion

Chafe (1972) observes that given information is apt to be attenuated both phonetically and syntactically. The present research fully supports his claim on phonetic attenuation in that each of the four prosodic features (phonological features, in Chafe's terms) was found to be attenuated in the predicted direction.

The findings of the present research can be summarized as follows. This research found that f0 value, duration, amplitude are important correlates of informational status in Standard Korean. It was also found that intonational phrasing can play sometimes a crucial and sometimes complementary role to the above-mentioned prosodic features. This result is very different from Fowler & Housum's (1987) study, which identified duration as a sole correlate of informational status. A couple of dubious points in the research method of their study have been also pointed out.

This research also generally supports the distinction of the three different informational statuses — new, current and displaced — by providing evidence that linguistic entities of these three different informational statuses are produced prosodically differently by Standard Korean speakers. However, the present research was very different from Brown's (1983) study in that this study found a clear difference in f0 value between current entities and displaced entities.

The results for this research generally support Jun's (1993) claim that informational status interacts with the phonological weight of expressions in affecting how Korean speakers accentually phrase them. The present research also showed that there is a clear idiolectal variation in accentual phrasing. Some speakers have the tendency to produce utterances with more accentual phrasings than others. It was also suggested that the effect of speech rate on accentual phrasing should be understood intra-individually rather than inter-individually. Finally I made a cautious suggestion that speakers of Standard Korean may show different patterns of accentual phrasing across different genres of discourse and that there might be cross-gender differences in the frequency of accentual phrasing. These are two areas where more extensive research could produce interesting findings.

7. References

Beckman, M. 1984. *Stress and nonstress accent.* Netherlands Phonetics Archives. 7. Dordrecht. Foris.

Behne, D. M. 1989. *Acoustic effects of focus and sentence position on stress in English and French.* Ph.D. dissertation. Department of Linguistics. University of Wisconsin at Madison.

Benguerel, A.P. 1970. *Some physiological aspects of stress in French.* Ph.D. dissertation. University of Michigan.

Bolinger, D. 1972. Accent is predictable (if you're a mind reader). *Language*. 48. 633-644.

Brown, G. 1983. Prosodic structure and the given/new distinction. In D.R. Ladd and A. Cutler (eds.), *Prosody: models and measurements*. 67-78. Springer Verlag. Berlin.

Brown, G and G. Yule. 1983. *Discourse analysis*. Cambridge University Press. New York.

Chafe, W. 1972. Discourse structure and human knowledge. In J.B. Carroll and R.O. Freedle (eds.), *Language comprehension and the acquisition of knowledge*. Washington. Wiley.

Chafe, W. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In C. Li (eds.), *Subject and topic*. 25-55. New York. Academic Press.

Cohen, A. and J. 't Hart. 1967. On the anatomy of intonation. *Lingua*. 19. 177-192.

de Jong, K. 1989. Initial tones and prominence in Seoul Korean. *Papers from the linguistics laboratory*. Department of Linguistics. Ohio State University. 43. 1-14.

Delattre, P. 1966. *Comparing the phonetic features of English, German, Spanish, and French*. Heidelberg. Julius Verlag.

di Cristo, A. 1978. De la microprosodie a l'intonosyntaxe. These de Doctorat d'Etat. Universite de Provence.

Fichtelius, A, I. Johansson and K. Nordin. 1980. Three investigations of sex-associated speech variation in day school. In C. Kramarae. (eds.), *The voices and words of women and men*. 219-26. Oxford. Pergamon Press.

Fowler, C.A. and J. Housum. 1987. Talkers' signaling of "new" and "old" words in speech and listeners' perception and use of the distinction. *Journal of Memory and Language*. 26. 489-504.

Fujisaki, H., H. Hirose, and K. Ohta. 1979. Acoustic features of the fundamental frequency contours of declarative sentences in Japanese. *Annual Bulletin* 13. 163-173. Research Institute of Logopedics and Phoniatrics. University of Tokyo.

Grosz, B. and J. Hirschberg. 1992. Some intonational characteristics of discourse structure. In *Proceedings of the International Conference on Spoken Language Processing*.

Halliday, M.A.K. 1967. Notes on transitivity and theme in English: part 2. *Journal of Linguistics*. 3. 109-244.

Hirschberg, J and J. Pierrehumbert. 1986. The intonational structuring of discourse. In *Proceedings of the 24th Annual Meeting*. 163-171. Stanford University. Association for Computational Linguistics.

Hirst, D.J. & A. di Cristo. 1984. French intonation: a parametric approach. *Die Neueren Sprachen.* 83:5. 554-569.

Horne, M. 1991. Accentual phrasing in 'new' vs. 'given' subjects in English. *Working Papers* 36. Department of Linguistics. Lund University. Lund.

Jun, S.A. 1993. *The phonetics and phonology of Korean prosody.* Ph.D. dissertation. Department of Linguistics. Ohio State University.

Klatt, D.H. 1976. Linguistic uses of segmental duration in English: acoustic and perceptual evidence. *JASA.* 59. 1208-1221.

Ko, D.H. 1988. Declarative intonation in Korean: an acoustical study of f0 declination. Seoul. Hanshin Publishing Co.

Koo, H.S. 1986. *An experimental acoustic study of the phonetics of intonation in Standard Korean.* Ph.D. dissertation. University of Texas at Austin. Hanshin Publishing Co. Seoul.

Lee, S.H. 1989. Intonational domains of the Seoul Dialect of Korean. Paper presented at the 117th meeting of the Acoustical Society of America. Syracuse, N.Y.

Lehiste, I. and G.E. Patterson. 1961. Some basic consideration in the analysis of intonation. *JASA.* 33. 367-84.

Lehman, C. 1977. A re-analysis of givenness: stress in discourse. In *Papers from the 13th Annual Meeting.* 316-330. Chicago Linguistic Society.

Maeda, S. 1976. *A characterization of American English intonation.* Ph.D. dissertation. M.I.T.

McConnel-Ginnet, S. 1983. Intonation in a man's world. In T. Barrie, K. Cheris and H. Nancy (eds.), *Language, gender and society.* Rowley, MA. Newbury House.

Nespor, M and I. Vogel. 1986. *Prosodic phonology.* Dordrecht. Foris.

Ohala, J. 1977. Physiology of stress. In L.M. Hyman (eds.), *ILL studies in stress and accent.* Southern California Occasional Papers in Linguistics. 4. 145-168.

Oller, D.K. 1973. The duration of speech segments: the effect of position in utterance and word length. *JASA.* 54. 1235-73.

Pierrehumbert, J. 1979. The perception of fundamental frequency declination. *JASA.* 66. 363-369.

Pierrehumbert, J. & M. Beckman 1988. *Japanese tone structure.* Cambridge. MIT Press.

Prince, E.F. 1981. Toward a taxonomy of given - new information. In P. Cole (eds.), *Radical pragmatics.* New York. Academic Press.

Selkirk, E. 1984. *Phonology and syntax: the relation between sound and structure*, Cambridge. MIT press.

Terken, J. 1984. The distribution of pitch accents in instructions as a function of discourse structure. *Language and Speech*. 27. 269-289.

Terango, L. 1966. Pitch and duration characteristics of theoral reading of males on a masculinity-feminity dimension. *Journal of Speech and Hearing Research*. 9. 590-95.

Vassiere, J. 1983. Language-independent prosodic features. In D.R. Ladd and A. Cutler (eds.), *Prosody: models and measurements*. 53-66. Springer Verlag. Berlin.

Yule, G. 1980. Speakers' topics and major paratones. *Lingua*. 52. 33-47.

Yule, G. 1981. New, current and displaced entity reference. *Lingua*. 55. 41-52.

* I thank Mary Beckman and Keith Johnson for their helpful comments. I also thank Sun-Ah Jun for her suggestions during the experiments and the analysis of the data.

Appendix 1

5-syllable phrases

5.1

A. yocim na-n saɹam-til-etæhæ silmaŋ-il manhi hæ.
nowadays I-Subj person-Pl-about disappointment-Obj much do.
"Nowadays I am very disappointed about people."

B. nəlp-in maim-il saɹam-til-i kacy-ess-tamyən coh-ilᵗʰente.
broad mind-Obj person-Pl-Subj have-Pst-if good-would be
"It would be good if people had a broad mind."

A. kiɹəke mal-ya.
right words-Decl
"That's right."

B. nəlp-in maim-i cəŋmallo cuŋyoha-n kəs katʰ-æ.
broad-Adj P mind-Subj really important seem to-Decl
"A broad mind seems to be really important."

5.2

A. nə-n acikto æki-katʰ-kuna.
you-Top still baby-like-Excl
"You are still like a baby."

B. kiɹæ mac-a. yep'i-n inhyəŋ-i na-n sesaŋ-esə ceil coh-a.
yes right-Decl pretty-Adj P doll-Subj I-Top world-Loc most like-Decl
"Yes, it's right. I like a pretty doll most in the world."

A. cəŋmal kɨɹ-æ?
really so-Int
"Is it really so?"

B. yep'i-n inhyəŋ-i iss-ɨmyən na-n əncena hæŋpokh-æ.
pretty-Adj P doll-Subj present-when I-Top always happy-Decl
"When I have a pretty girl, I am always happy."
(Excl: exclamatory)

5.3

A. ol kaɨl-e-nɨn uɹi hamkke muənka-lil hæ poca.
this fall-Loc-Top we together something-Obj do try-Hort
"Let's do something together in this fall."

B. kɨɹæ. kou-n noɹæ-lil yep'i-ke hana mantil-ə po-ca.
yes pretty-Adj P song-Obj pretty-Adv P one make-Adv P try-Hort
"Yes. Let us make a pretty song *prettily*"

A. coh-ɨn sæŋkak-i-ya.
good-Adj P idea-Cop-Decl
"That's a good idea."

B. kou-n noɹæ-ka iss-ɨmyən uɹi maɨm-to kop-ke twel-kəya.
pretty-Adj P song-Subj present-if our heart-also pretty-Adv P become-Decl
"If we have a pretty song, our heart will also become pretty."
(Hort: hortatory)

6-syllable phrases

6.1

A. nə toŋmul-il coh-a ha-ni?
you animal-Obj like-Adv P like-Int
"Do you like animals?"

B. pukmisan yəu-ka na-n coh-a.
North-American fox-Subj I-Top like-Int
"I like North-American foxes."

A. na-n yəu-ka silh-ɨnte.
I-Top fox-Subj dislike-Decl
"I do not like foxes."

B. pukmi-san yəu-lil han pən po-a. cəŋmal məsiss-ə.
North American fox-Obj once look at-Int really charming-Decl
"Take a look at North American foxes once. They are really charming."

6.2

A. nə sæŋsən-il coha-ntamyə?
you fish-Obj like-I heard
"I heard that you like fish, is that true?"

B. wanto-san iŋə-il na-n cohah-æ.
Wanto-produced carp-Obj I-Top like-Decl
"I like Wanto-produced carps."

A. com s'i-ci anh-a?
slightly spicy-Adv P not-Int
"Isn't it slightly spicy?"

B. anya. wanto-san inə-lil mək-imyən na-n acu kənkaŋhæ ci-
No Wanto-produced carp-Obj eat-when I-Top very healthy become-
nin kipun-iya.
Adj P feeling-Decl

"No. When I eat Wanto-produced carps, I feel as if I were becoming healthy."

6.3

A. ipən kail-e-nin muənka-lil hæ po-ko sip^{h}-inte
this fall-Loc-Top something-Obj do try-Adv P want to-Decl
"I want to do something this fall."

B. atamha-n pyəlcan-il ci-ə po-ci kiɹæ?
little-Adj P villa-Obj build-Adv P why don't you
"Why don't you build a little villa?"

A. kikə kwenc^{h}anh-in sæŋkak-inte.
that good-Adj P idea-Int
"That is a good idea."

B. atamha-n pyəlcan-i iss-imyən ne maim-to p^{h}ukinha-lkəya.
little-Adj P villa-Subj present-if your heart-also warm-Decl
"If you have a little villa, your heart will also be warm."

7-syllable phrases

7.1

A. nals'i-ka we iɹəh-ke təp-ci?
weather-Subj why like this-Adv P hot-Int
" Why is the weather this hot?"

B. kiɹə-ke mal-ya. siwənha-n əlim-mul-i iss-imyən coh-kess-ta.
so-Adv P word-Decl cool-Adj P ice-water-Subj present-if good-will-Decl
"Very right. It would be good if there were ice-water."

A. we. næŋsuyok-il haɹyə-ko?
why cold bath-Obj do-Int
"Why? Do you want to have a cold bath?"

B. aniya. siwənha-n əlim-mul-il manhi com masi-ɹyə-ko.
no cool-Adj P ice-water-Obj much drink-Vol-Decl
"No. I want to drink much ice water."
(Vol: volition)

7.2

A. na yocim untoŋ-i p^{h}ilyoha-n kəss kat-æ.
I nowadays exercise-Subj necessary-Adj P seem to-Decl
"I seem to need exercise these days."

B. kapyəu-n taliki-ka kənkaŋ-e c^{h}weko-ya.
light-Adj P running-Subj health-to best-Decl
"It is best to do a light running."

A. kike kiɹəh-ke coh-a?
it so-Adv P good-Int
"Is it that good?"

B. kapyəu-n taliki-lil nalmata h-æ po-a. kənkaŋ-e kiman-iya.
light-Adj P running-Obj everyday do-Adv P try-Imp health-to very good-Decl
"Try to do a light running everyday. It is very good for your health."

7.3

A. kwail-iɹako ta masiss-in kess-in ani-ci?
fruit-Subj every tasty-Adj P not-Int
"Not every fruit is tasty. Isn't that right?"

B. ki-jæ. səlik-in panana-ka na-nin silh-ə.
right-Decl unripe-Adj P banana-Subj I-Top hate-Decl
"Right. I dislike unripe banana."

A. tikpyəl-han iyu-ka iss-ni?
special-Adj P reason-Subj exist-Int
"Is there a special reason for that?"

B. səlik-in panana-ɨl mək-imyən na-n cal c^{h}eh-æ.
unripe-Adj P banana-Obj eat-if I-Subj easily have a stomachache-Decl
"When I eat much unripe banana, I easily have a stomachache."

Appendix 2

Han vs. Ki (6 pairs)

1:han

B. na yocim noɹæ hana-l mantil-ko iss-ə.
I nowadays song one-Obj make-Adv P Aux-Decl
"I am making a song nowadays."

A. ət'ə-n noɹæ-nte?
what kind of song-Int
"What kind of song is it?"

B. han ina-ka waŋca-eke saɹaŋ-il p^{h}yohyənha-nin noɹæ-ya.
a mermaid-Subj prince-Dat love-Obj express-Adj P song-Decl
"A mermaid expresses her love for a prince in that song."

1:ki

B. na yocim han inə-etæhan noɹæ-l mantil-ko iss-e.
I nowadays a mermaid-about song-Obj make-Adv P Aux-Decl
"I am making a song about a mermaid nowadays."

A. ət'ə-n næyoŋ-inte?
what content-int
"What is the content of the song like?"

B. ki inə-ka waŋca-eke saɹaŋ-il p^{h}yohyənha-nin noɹæ-ya.
the mermaid-Subj prince-Dat love-Obj express-Adj P song-Decl
"The mermaid expresses her love for a prince in that song."

2:han

B. næ tu pən-c'æ hiikok-i kəcin wansəŋtwe-ss-ə
my second comedy almost is finished-Pst-Decl
"I almost finished my second comedy."

A. ət'ə-n culkəɹi-ci?
what content-Int
"What is its story like?"

B. han mæŋin-i nun-il t'i-ke twe-nin iyaki-ya.
a blind man-Subj eye-Obj open-Adv P come to-Adj P story-Decl
"A blind man opens his eyes in the story."

2:ki

B. næ tu pən-c'æ hiikok-in han mæŋin-etæhan iyaki-ya.
my second comedy-Top a blind man-about story-Decl
"My second comedy is a story about a blind man."

A. ət'əhke yæki-ka cinhæŋtwe-ci?
how story-Subj proceed-Int
"How does the story go?"

B. ki mæŋin-i nun-il t'i-ke twe-nin iyaki-ya.
the blind man-Subj eye-Obj open-Adv P come to-Adj P story-Decl
"The blind man opens his eyes in the story."

3:han

B. cinu-ka sosəl-il hana s'ə-ss-te.
Cinu-Subj novel-Obj one write-Pst-I heard
" Cinu wrote a novel, I heard"

A. ət'ə-n næyoŋ-ici?
what content-int
"What is the content of the novel like?"

B. han yəŋuŋ-i nacuŋe cewaŋ-i twe-nin iyaki-ɹæ.
a hero-Subj later king-Comp become-Adj P story-I heard
"A hero becomes a king in the novel, I heard."

3:ki

B. cinu-ka han yəŋuŋ-etæhan sosəl-il s'ə-ss-tæ.
Cinu-ka a hero-about novel-Obj write-Pst-I heard
"Cinu wrote a novel about a hero, I heard."

A. ət'ə-n næyoŋ-ici?
what content-int
"What is the content of the novel like?"

B. ki yəŋuŋ-i nacuŋe cewaŋ-i twe-nin iyaki-ɹæ.
the hero-Subj later king-Comp become-Adj P story-I heard
"The hero becomes a king in the novel, I heard."

4:han

B. minsu-ka ipən-e yəŋhwa-lil hana mantil-ess-tæ.
Minsu-Subj this time movie-Obj one make-Pst-I heard
"Minsu made a movie this time, I heard."

A. ət'ə-n næyoŋ-i-nci a-ni?
what content-Cop-Adv P know-Int
"Do you know what is the story of that movie?"

B. han kunin-e pikikcək sæŋæ-lil kiɹi-n cakp^{h}um-iɹæ.
a soldier-Pos tragic life-Obj describe-Adj P work-I heard
"It is a work which describes the tragic life of a soldier, I heard."

4:ki

B. minsu-ka ipən-e han kunin-etæhan yəŋhwa-lil mantil-ess-tæ.
Minsu-Subj this time a soldier-about movie-Obj make-Pst-I heard
"Minsu made a movie about a soldier this time, I heard."

A. ət'ə-n næyoŋ-i-nci a-ni?
what content-Cop-Adv P know-Int
"Do you know what is the story of that movie?"

B. ki kunin-e pikikcək sæŋæ-lil kiɹi-n cakp^{h}um-iɹæ.
the soldier-Pos tragic life-Obj describe-Adj P work-I heard
"It is a work which describes the tragic life of the soldier, I heard."

5:han

B. na ipən-e uhwa-lil hana s'i-ess-ə.
I this time fable-Obj one write-Pst-Decl
"I wrote a fable this time."

A. ət'ə-n uhwa-inte?
what kind of fable-Int
"What kind of fable is it?"

B. han yəu-ka pyəɹak-puca-ka twe-nin iyaki-ya.
a fox-Subj upstart-Subj become-Adj P story-Decl
"A fox becomes an upstart in that fable."

5:ki

B. na ipən-e han yəu-etæhan uhwa-lil s'ə-ss-ə.
I this time a fox-about fable-Obj write-Pst-Decl
"I wrote a fable about a fox this time."

A. ət'ə-n yæki-nte
what kind of story-Int
"How does the story go?"

B. ki yəu-ka pyəɹak-puca-ka twe-nin iyaki-ya.
the fox-Subj upstart-Subj become-Adj P story-Decl
"The fox becomes an upstart in that fable."

6:han

B. na ipən-e kakik-il hana mantil-ess-e.
I this time opera-Obj one make-Pst-Decl

"I made an opera this time."

A. ət'ə-n næyoŋ-inte?
what content-int
"What is the story of the opera like?"

B. han manyə-ka minam $c^hə$ŋnyən-il yuhokha-nin yæki-ya.
a witch-Subj handsome young man-Obj seduce-Adj P story-Decl
"A witch seduces a handsome young man in the story."

6:ki

B. na han manyə-etæhan kakik-il mantil-əss-ə.
I a witch-about opera-Obj make-Pst-Decl
"I made an opera about a witch"

A. ət'ə-n næyoŋ-inte?
what content-int
"What is the story of the opera like?"

B. ki manyə-ka minam $c^hə$ŋnyən-il yuhokha-nin yæki-ya.
the witch-Subj handsome young man-Obj seduce-Adj P story-Decl
"The witch seduces a handsome young man in the story."

Appendix 3

han yes-iyaki

acu oɹe cən-e iyaki-ipnita kangwonto-e yəŋwəl-iɹapulli-nin han
very long ago-AdjP story-Decl kangwonto-Loc yəŋwəl- so called-AdjP a

mail-i iss-ess-ipnita. yep'in yəin-i han saɹam coyonhi sal-ko iss-aess-ipnita.
village-Subj exist-Pst-Decl pretty woman-Subj a person calmly live-AdvP Prog-Pst-Decl

yepin yəin-in əcil-ko maimsi c^hakhæ-ss-ipnita. aɹin mail saɹam-til-to
pretty woman-Top kind-Conj mind good-Pst-Decl other village person-Pl-also

cəncikha-n maims'i-il kaci-ko iss-əss-ipnita. t'aɹasə i mail-in ki cəncikham-iɹo
honest-AdjP mind-Obj have-AdvP Aux-Pst-Decl thus this village-Top that honesty-Instr

naɹa-an-e nəli alyə-cə iss-ess-ipnita. naɹa ane ki iɹim-i hweca
country-in-Loc widely known-AdvP Aux-Pst-Decl country inside the name-Subj oftenmentioned

twe-ess-ipnita. yepin yəin-in thikhi maim-i chakhæ-sə kananha-n saɹam-il
-Pst-Decl pretty woman-Top especially mind-Subj good-AdvP poor-AdjP person-Obj

po-myən kaci-n motin kess-il cu-ə pəɹi-kon hæ-ss-ipnita.
see-if have-AdjP all thing-Obj give-AdvP Aux-AdvP do-Pst-Decl

kiɹətən əni nal-i-ess-ipnita. p^hokp^{h}unu-ka c^hit-an nal-i-ess-ipnita. kəmin
such one day-Subj-Pst-Decl storm-Subj fall-AdjP day-Subj-Pst-Decl black

iɹi-ka ətisənci natana-ss-ipnita. kəmin iɹi-nin muc^{h}ək p^{h}oakhæ-sə yəin-kwa
wolf-Subj from nowhere appear-Pst-Decl black wolf-Top very violent-since woman-and

mail saɹam-til-il kweɹophi-ki sicak-hæ-ss-ipnita. yəin-e mom-kwa maim-i
village person-Pl-Obj harass-NomP begin-do-Pst-Decl woman-Pos body-and mind-Subj

sweyakhæ ka-ss-ipnita. tajin mail saram-til-to kweɹo-wa hæ-ss-ipnita.
get weak-Pst-Decl other village person-Pl-also show pain-Pst- Decl

i mail-in kotʰoŋ-iɹo katik cʰa iss-əss-ipnita. kəm-in iɹi-nin əmcʰəŋnan
this village-Top pain-with fully filled Aux-Pst-Decl black wolf-Top tremendous

kotʰoŋ-il yəin-eke cu-ess-ipnita.
pain-Obj woman-Dat give-Pst-Decl

han tal-i cina-sə yəss-ipnita. nickail nal-i-ess-ipnita. yəp-mail
one month-Subj pass-AdvP Pst-Decl late fall day-Subj-Pst-Decl neighbor-village

cʰəŋnyən-i yoŋkamhito cʰass-a wa-ss-ipnita. yəp-mail chəŋnyən-in yəin-e
young man-Subj bravely come-AdvP come-Pst-Decl neighbor-village young man-Top woman-Pos

cʰinku-yə-ss-ko him-i se-myə nallyəphæ-ss-ipnita. haciman iɹi-nin əni saɹam-potato
friend-Cop-Pst-and power-Subj strong-and agile-Pst-Decl but wolf-Top any person-than

him-i se-ss-ipnita. t'ohan əni nuku-potato mincʰəphæ-ss-ipnita. əni
power-Subj strong-Pst-Decl also any person-than agile-Pst-Decl any

nuku-to iɹi-lil iki-sun əp-əss-ipnita. yəp-mail cʰəŋnyən-in iɹi-wa sauki-l
person-Subj wolf-Obj defeat not able to-Decl neighbor-village young man-Top wolf-with fight

wonhæ-ss-ipnita. cʰəŋnyən-kwa iɹi-nin pʰina-nin hyəlʰu-lil hæ-ss-ipnita. kiɹəna
want-Pst-Decl young man-Conj wolf-Top bloody-Top fight-Obj have-Pst-Decl but

cʰəŋnyən-in iɹi-e saŋtæ-nin twe-l su əp-əss-ipnita. chəŋnyən-in iɹi-e
young man-Top wolf-Pos match-Top cannot become-Pst-Decl young man-Top wolf-by

mul-lyə kəii cukim-e iɹi-ke twe-əss-ipnita.
bitten-AdvP almost death-Loc reach-AdvP come to-Pst-Decl

paɹo i t'æ-y-əss-ipnita. paɹam-i mopsi pu-l t'æ-yə-ss-ipnita. nuɹ-
very this moment-Cop-Pst-Decl wind-Subj severely blow-AdjP time-Cop-Pst-Decl yellow

ən koyaŋi-ka ətisənci natʰana-ss-ipnita. nuɹə-n koyaŋi-nin ki cʰəŋnyən-e
AdjP cat-Subj from nowhere appear-Pst-Decl yellow-AdjP cat-Top the young man-Pos

kəss-i-ess-ipnita. kəm-in iɹi-nin cʰəŋnyən-e mok-il mul-ko iss-əss-ipnita.
thing-Subj-Pst-Decl black wolf-Top young man-Pos neck-Obj bite-AdvP Prog-Pst-Decl

chəŋnyən-in kotʰoŋsiɹə-n pimyən-il ciɹi-ko iss-əss-ipnita. kotʰoŋ-iɹo cənsin-i
young man-Top painful scream-Obj make-AdvP Prog-Pst-Decl pain-due to whole body-Subj

t'əli-ko iss-ess-ipnita. nuɹə-n koyaŋi-nin iɹi-lil camsi noryo po-n hu iɹi-lil
tremble-AdvP Prog-Pst-Decl yellow-AdjP cat-Top wolf-Obj briefly stare-Adj P after wolf-Obj

kapcaki koŋkyəkhæ-ss-ipnita. iɹi-nin mul-əss-tən cʰəŋnyən-il no-ayaman hæss-ipnita
suddenly attack-Pst-Decl wolf-Top bite-Pst-AdjP young man-Obj let go-have to-Pst-Decl

koyaŋi-wa cʰəŋnyən-in hamk'e iɹi-wa s'awə-ss-ipnita. kəii myəs sikan-il
cat-and young man-Top together wolf-with fight-Pst-Decl almost several hour-Obj

s'awə-ss-ipnita. hanil-e toum-i iss-ess-tənci tul-in iɹi-lil mulichi-l su ss-ess-ipnita.
fight-Pst-Decl heaven-Pos help-Sub exist-Pst-Subj two-Top wolf-Obj defeat-AdjP able to-Pst-Decl

kit'æ hanil-esə-n əksu kat-in pi-ka næɹi-ko iss-ess-ipnita.
then Heaven-Loc-Top torrential rain-Subj fall-AdvP Prog-Pst-Decl

An Old Story

This is a very old story. There was a village called "yeongweol" in Kangwon Province. A **pretty woman** was living there quietly. The **pretty woman** was kind and good-natured. Other villagers also had an honest mind. Therefore this village was widely known for its honesty throughout the country. People often talked about this village. The **pretty woman** was especially good-natured that she used to give everything she had when she saw a poor person.

It was one of those days. It was a day when it was storming. A **black wolf** appeared suddenly in the village. The **black wolf** was so violent that he began to harass the woman and other villagers. The body and mind of the woman became very weak. Other villagers were also in pain. This village was filled with pain. The **black wolf** gave tremendous pain to the woman.

One month passed. It was a late autumn day. A **neighbor-village-young-man** came here bravely. The **neighbor-village-young-man** was the woman's friend and powerful and agile. Yet the wolf was more powerful than any person. The wolf was also more agile than any person. Nobody was able to defeat the wolf. The **neighbor-village-young-man** wanted to fight with the wolf. The young-man and the wolf fought a bloody fight. But the young-man could not be a match to the wolf. The young-man was beaten by the wolf and in a near-death situation.

At this very moment, when it was violently windy, a **yellow cat** appeared from nowhere. The **yellow cat** belonged to the young-man. The black wolf was biting the man's neck. The young-man was screaming very painfully. The young-man's whole body was trembling from pain. The **yellow cat** stared at the wolf for a while and suddenly attacked the wolf. The wolf had to release the young-man it had been biting. The cat and the young-man fought together against the wolf. They fought for hours. Thanks to the Heaven's help, they were able to defeat the wolf. Rain was falling so torrentially from the sky at that time.